UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/055,712	04/07/1998	HYOUNG-JOO LEE	1317.1028/MD	4304

21171   7590   02/01/2011
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ART UNIT	PAPER NUMBER
2424	

MAIL DATE	DELIVERY MODE
02/01/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
   Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>08 November 2010</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,5-17,20-31,33-35 and 53-63</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,5-17,20-31,33-35 and 53-63</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☒ All   b) ☐ Some * c) ☐ None of:

   1. ☒ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This action is responsive to an Amendment filed 11/08/2010. Claims **1**, **5-17**, **20-31**, **33-35**, **53-63** are pending. Claims **26**, **28-30** are amended. Claims **2-4**, **18**, **19**, **32**, **36-52** are canceled.

Response to Arguments

2.   Applicant's arguments regarding claims **1**, **7**, **12**, **13**, **17**, **21**, **26-31**, **33-35**, **53**, **55**, **57**, and **59**, filed 11/08/2010, have been fully considered, but they are not persuasive.

Regarding claims **1**, **7**, **12**, **13**, **17**, **21**, **26-31**, **33-35**, **53**, **55**, and **57**, the applicant argues that the phrase "without a user input after the user issues the display command" is supported in paragraph 33 of the specification. The examiner respectfully disagrees. Paragraph 33 recites that, after displaying the program progress time information, the microprocessor determines whether a specified time interval has elapsed and closes the display window of the program progress time information after the specified time interval has elapsed (paragraph 33 of Applicant's specification). Applicant argues that, because where user interaction is needed is clearly set forth in the specification, here, where operations are performed automatically is equally clearly set forth. The examiner notes that any negative limitation or exclusionary proviso must have basis in the original disclosure. The mere absence of a positive recitation is not basis for an exclusion (see MPEP 2173.05(i)). Here, the mere fact that no user input was

positively recited is not a basis for exclusion of user input. As such, the examiner maintains the

rejection of the claims under 35 USC 112, first paragraph.

Further regarding claims **1**, **7**, **12**, **13**, **17**, **21**, **26-31**, **33-35**, **53**, **55**, and **57**, the applicant

argues that Young et al. does not disclose displaying time information about a currently viewed

program and then causing the display to disappear automatically without any additional input

when the predetermined time elapses. The examiner respectfully disagrees. Applicant

specifically argues that the Grazing Title pop ups are considered different in Young et al. than

the program note 70 including a display bar. Young et al. discloses Grazing Titles pop ups that

remain on the screen for two seconds after the user changes channels (col. 27, l. 30-38). In

column 27, l. 25-37, Young et al. discloses a kind of program grazing the user can perform

without leaving the current channel. Young et al. discloses that the Grazing Titles pop up

remains on the screen for two seconds (col. 27, l. 35). Young et al. also discloses that this is the

same amount of time Grazing Titles pop ups remain on the screen during normal channel grazing

(col. 27, l. 35-37). Normal channel grazing is disclosed in Figure 11 of Young et al. (Fig. 11).

When a user changes a channel, a Grazing Title pop up is displayed if Grazing Titles are

Enabled. If the channel is not changed again and select is not pressed, the flow chart of Figure

11 goes to other and the title is removed after two seconds as noted above. If the select button is

selected, the program notes are displayed. If the select button is not again selected, the path

follows the same path as before to other, and the title and notes are cleared after two seconds.

Applicant argues that Young et al. discloses that the program note only disappears when the

select key is pressed a second time or the cancel key is pressed; however, it is apparent that

whether the user presses the select key a second time or not the same path in the flowchart is

followed. The cancel key is used for changing the Grazing Titles mode to Auto-Off, in which

grazing titles are disabled (Fig. 11). This is also reflected in the specification, which states that

grazing titles may be de-activated using the cancel key (col. 10, l. 36-37). Additionally, the

examiner notes that Young et al. refers to both Figures 9 and 10 as channel grazing overlays (col.

10, l. 20-22). As such, the examiner maintains that Young et al. discloses that the progress

information is displayed according to a display command and then disappears when

predetermined time elapses without a user input, as currently claimed.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

4.   Claims **1**, **5-17**, **20-31**, **33-35**, **53-58**, **60**, and **61** are rejected under 35 U.S.C. 112, first

paragraph, as failing to comply with the written description requirement. The claim(s) contains

subject matter, which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

Referring to claims **1**, **7**, **12**, **13**, **17**, **21**, **26-31**, **33-35**, **53**, **55**, and **57**, the examiner fails

to find support in Applicant's specification for the phrase "without a user input after the user

issues the display command," as currently claimed. Applicant's specification states that the

display window of the program progress time information is closed after a specified time interval

has elapsed (paragraph 33 of published version of Applicant's specification US 2002/0010926),

but does not recite anything about this occurring without a user input after the user issues the

display command.

Claims **5**, **6**, **8-11**, **14-16**, **20**, **22-25**, **54**, **56**, **58**, **60**, and **61** are rejected as being

dependent on the aforementioned independent claims.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

6.   Claim **53-58**, **60** are rejected under 35 U.S.C. 102(e) as being anticipated by Young.

Referring to claims **53**, **55**, **57**, **58**, and **60**, Young discloses a display device/method

which displays program progress information of a current program (item 72)(Fig. 10), the

display device/method comprising:

- a receiver which receives the current program and at least one of a beginning time of

  the current program (S)(item 72)(Fig. 10) and a terminating time of the current

  program (F)(item 72)(Fig. 10);

- a display which displays the current program (Figs. 10, 22A), and the program

  progress information of the current program (item 72)(Fig. 10), wherein the program

  progress information includes the beginning time of the current program (S)(item

  72)(Fig. 10), a current time (vertical line)(item 72)(Fig. 10), the terminating time of

the current program (F)(item 72)(Fig. 10) and a progress bar indicating a progress

time of the current program (item 72)(Fig. 10), wherein the beginning time of the

current program, the current time, and the terminating time of the current program are

displayed in a numerical format (the examiner interprets item 72 to be displayed in

numerical format, since program progress is displayed as a fraction/percent of the bar

representing total program duration), and wherein the progress bar has a first end (S)

and a second end (F), and the beginning time is displayed in the numerical format at

the first end of the progress bar (end corresponding to empty bar) and the terminating

time is displayed in the numerical format at the second end of the progress bar (end

corresponding to full bar), and the progress time of the current program is displayed

on the progress bar between the first end and the second end (vertical line)(item

72)(Fig. 10), wherein the program progress information is displayed transiently for a

predetermined time in response to a display command set by a user and automatically

disappears after said predetermined time has elapsed, without a user input after the

user sets the display command (the examiner notes that the time bar 72 is displayed

until the user presses Select again (see Fig. 11) or until two seconds have expired

(col. 27, l. 34-38). That is, the system is configured to display the time bar until the

time at which a user presses the Select button again or until two seconds have

expired, at which time the CPU automatically causes the display bar to disappear.

The examiner interprets this as displaying the time bar transiently for a predetermined

time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Further referring to claims **57**, **58**, and **60**, Young discloses that a type of the time information

corresponds to which of the beginning time, the current time and the terminating time is

displayed as the time information and the time information is displayed in a location relative to

the progress bar, such that the location depends on the type of the time information (start time S

is displayed at left-end of bar, finish time F is displayed at right-end of bar, and current time

(vertical line) is displayed at a position corresponding to current time in program)(item 72)(Fig.

10).

Referring to claims **54** and **56**, Young discloses the display device/method as claimed in

claims 53 and 55, respectively, further comprising a microprocessor to determine a remaining

time of the current program, and the remaining time is displayed as a first color (white)(item

72)(Fig. 10), wherein the progress time of the current program is displayed as a second color

(gray)(item 72)(Fig. 10) and wherein the first color and the second color are displayed on the

progress bar (item 72)(Fig. 10).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claims **1**, **5-12**, **61** are rejected under 35 U.S.C. 103(a) as being unpatentable over Young

(of record) in view of Russo et al. (of record), and further in view of ATSC Digital Television

Standard A/53.

Referring to claim **1**, Young discloses a method of displaying a program progress time

(item 72) on a signal receiver (Fig. 10) which receives and processes program guide information

containing a program schedule (col. 17, l. 37-44), comprising:

- storing the program guide information (to a schedule memory)(item 232)(col. 17, l.

  37-44 & Fig. 22A);

- setting a command of the signal receiver which is commonly usable by a user as a

  display command to display time information about a currently viewed program

  (program time information is displayed on demand for the user)(col. 10, l. 20-40 &

  Fig. 10); and

- displaying, in a numerical format (the examiner interprets item 72 to be displayed in

  numerical format, since program progress is displayed as a fraction/percent of the bar

  representing total program duration), the time information about the currently viewed

  program together with the currently viewed program when the user issues the display

  command set in said setting a command (user uses a Select command for displaying

  the information)(col. 8, l. 66-67; col. 9, l. 1-10; col. 10, l. 20-40; & Figs. 10, 11), the

  time information comprising a beginning time with respect to the currently viewed

  program, a program terminating time of the currently viewed program, and a current

  time with respect to the currently viewed program (item 72 is a percentage calibrated

  time bar, where S indicates a beginning time, F indicates a finishing time, and current

  time is indicated by a vertical line within the bar. Current time is additionally

  indicated in 62 as 11:00A)(col. 10, l. 20-40 & Fig. 10);

-   displaying a display bar (item 72) representing a total program broadcasting time of the currently viewed program (Fig. 10); and

-   automatically displaying next program information when a remaining program time reaches a preset time (the examiner notes that when the remaining time reaches zero, the next broadcast program comes on. The examiner interprets this as automatically displaying next program information when a remaining program time reaches a preset time), wherein the time information and the display bar are displayed transiently for a predetermined time when a user issues the display command set in said setting the command and disappear after said predetermined time has elapsed, without a user input after the user issues the display command (the examiner notes that the time bar 72 is displayed until the user presses Select again (see Fig. 11) or until two seconds have expired (col. 27, l. 34-38 & Fig. 11). That is, the system is configured to display the time bar until the time at which a user presses the Select button again or until two seconds have expired. The examiner interprets this as displaying the time bar transiently for a predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically disclose that the beginning time is below a left-most end of the display bar, the program terminating time is below a right-most end of the display bar, and the current time is below the display bar at a position corresponding to the program progress time. Russo et al. discloses a graphical display bar indicating progress time of a video program currently being received (col. 9, l. 32-51 & Fig. 2C). The width of the bar is fixed and indicative of the program length, and is divided up into a left-hand already received and recorded portion 242 and a right-hand yet-to-be received and recorded portion 244, separated by a delineation 246

indicative of current time. Thus, as the program is received and recorded, the boundary 246 will

slowly move from left to right to convey to a viewer that a larger and larger percentage of the

incoming program is being stored. The examiner further notes that the begin time is displayed

with numerical characters below a left-most end of the display bar, the end time is displayed with

numerical characters below a right-most end of the display bar, and the current time is displayed

below the display bar at a position corresponding to the current time (col. 9, l. 32-51 & Fig. 2C).

It would have been obvious to one of ordinary skill in the art at the time that the invention was

made to modify the time bar of Young to display beginning time in numerical characters below a

left-most end of the display bar, ending time in numerical characters below a right-most end of

the display bar, and current time in numerical characters below a position of the display bar

corresponding to the current time, such as that taught by Russo et al. in order to provide

convenient facilities to communicate playback progress and to mark points of interest to the user

(Russo et al. col. 2, l. 17-21).

The combination of Young and Russo et al. does not specifically teach receiving an

Advanced Television Standards Committee (ATSC) digital television signal in a transport stream

packet transmitted from a broadcasting station, parsing program information of a plurality of

television programs from the received signal, and retrieving program guide information from the

parsed program information. ATSC Digital Television Standard discloses a digital television

standard designed to transmit high quality video and audio over a single 6 MHz channel (p. 18,

Section 5.1 Objectives). ATSC Digital Television Standard further discloses receiving the

ATSC signal (p. 19, Figure 5.1). ATSC Digital Television Standard discloses that video, audio,

ancillary data, and control data are multiplexed by dividing the digital data stream into packets of

information by employing the MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure

5.1). ATSC Digital Television Standard also discloses that an interactive program guide

database may be transmitted in the transport stream, which allows a receiver to build an on-

screen grid of program information and contains control information to facilitate navigation (p.

42, Section 5.6.1.1 Master program guide PID). It would have been obvious to one of ordinary

skill in the art at the time that the invention was made to modify the combination of Young and

Russo et al. to receive ATSC digital television signals and parse program guide information from

the signals, such as that taught by ATSC Digital Television Standard in order to increase

efficiency in utilizing available channel capacity (ATSC Digital Television Standard p. 18,

Section 5.1).

Referring to claim **5**, the combination of Young, Russo et al., and ATSC Digital

Television Standard teaches a method of displaying a program progress time as claimed in claim

1, wherein the time information includes the program progress time determined by subtracting

the beginning time from the current time (Young displays the progress time as a grayed portion

of the bar between the current time and the start time)(item 72)(Young Fig. 10).

Referring to claim **6**, the combination of Young, Russo et al., and ATSC Digital

Television Standard teaches a method of displaying a program progress time as claimed in claim

5, wherein the time information further comprises the remaining program time determined by

subtracting the current time from the program terminating time (Young displays the remaining

program time as a white portion of the bar between the current time and the finish time)(item

72)(Young Fig. 10).

Referring to claim **7**, Young discloses a method of displaying a program progress time (item 72) on a signal receiver (Fig. 10) which receives and processes program guide information containing a program schedule (col. 17, l. 37-44), comprising:

- storing the program guide information (to a schedule memory)(item 232)(col. 17, l. 37-44 & Fig. 22A);

- automatically displaying time information, in a numerical format (the examiner interprets item 72 to be displayed in numerical format, since program progress is displayed as a fraction/percent of the bar representing total program duration), about a currently viewed program on the signal receiver when a user issues a display command (user uses a Select command for displaying the information)(col. 10, l. 20-40 & Fig. 10) the time information including a beginning time with respect to the currently viewed program, a program terminating time of the currently viewed program, and a current time with respect to the currently viewed program (item 72 is a percentage calibrated time bar, where S indicates a beginning time, F indicates a finishing time, and current time is indicated by a vertical line within the bar. Current time is additionally indicated in 62 as 11:00A)(col. 10, l. 20-40 & Fig. 10);

- displaying a display bar (item 72) representing a total program broadcasting time of the currently viewed program (Fig. 10); and

- automatically displaying next program information when a remaining program time reaches a preset time (the examiner notes that when the remaining time reaches zero, the next broadcast program comes on. The examiner interprets this as automatically displaying next program information when a remaining program time reaches a preset

time), wherein the time information and display bar are displayed transiently for a predetermined time when the user issues the display command and disappear after said predetermined time has elapsed, without a user input after the user issues the display command (the examiner notes that the time bar 72 is displayed until the user presses Select again (see Fig. 11) or until two seconds have expired (col. 27, l. 34-38). That is, the system is configured to display the time bar until the time at which a user presses the Select button again or until two seconds have expired. The examiner interprets this as displaying the time bar transiently for a predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically disclose that the beginning time is below a left-most end of the display bar, the program terminating time is below a right-most end of the display bar, and the current time is below the display bar at a position corresponding to the program progress time. Russo et al. discloses a graphical display bar indicating progress time of a video program currently being received (col. 9, l. 32-51 & Fig. 2C). The width of the bar is fixed and indicative of the program length, and is divided up into a left-hand already received and recorded portion 242 and a right-hand yet-to-be received and recorded portion 244, separated by a delineation 246 indicative of current time. Thus, as the program is received and recorded, the boundary 246 will slowly move from left to right to convey to a viewer that a larger and larger percentage of the incoming program is being stored. The examiner further notes that the begin time is displayed with numerical characters below a left-most end of the display bar, the end time is displayed with numerical characters below a right-most end of the display bar, and the current time is displayed below the display bar at a position corresponding to the current time (col. 9, l. 32-51 & Fig. 2C).

It would have been obvious to one of ordinary skill in the art at the time that the invention was

made to modify the time bar of Young to display beginning time in numerical characters below a

left-most end of the display bar, ending time in numerical characters below a right-most end of

the display bar, and current time in numerical characters below a position of the display bar

corresponding to the current time, such as that taught by Russo et al. in order to provide

convenient facilities to communicate playback progress and to mark points of interest to the user

(Russo et al. col. 2, l. 17-21).

The combination of Young and Russo et al. does not specifically teach receiving an

Advanced Television Standards Committee (ATSC) digital television signal in a transport stream

packet transmitted from a broadcasting station, parsing program information of a plurality of

television programs from the received signal, and retrieving program guide information from the

parsed program information. ATSC Digital Television Standard discloses a digital television

standard designed to transmit high quality video and audio over a single 6 MHz channel (p. 18,

Section 5.1 Objectives). ATSC Digital Television Standard further discloses receiving the

ATSC signal (p. 19, Figure 5.1). ATSC Digital Television Standard discloses that video, audio,

ancillary data, and control data are multiplexed by dividing the digital data stream into packets of

information by employing the MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure

5.1). ATSC Digital Television Standard also discloses that an interactive program guide

database may be transmitted in the transport stream, which allows a receiver to build an on-

screen grid of program information and contains control information to facilitate navigation (p.

42, Section 5.6.1.1 Master program guide PID). It would have been obvious to one of ordinary

skill in the art at the time that the invention was made to modify the combination of Young and

Russo et al. to receive ATSC digital television signals and parse program guide information from

the signals, such as that taught by ATSC Digital Television Standard in order to increase

efficiency in utilizing available channel capacity (ATSC Digital Television Standard p. 18,

Section 5.1).

Referring to claim **8**, the combination of Young, Russo et al., and ATSC Digital

Television Standard teaches a method of displaying a program progress time as claimed in claim

7, wherein the time information further comprises a percentage of the program progress time as

compared with the total program broadcasting time calculated by subtracting the beginning time

from the program terminating time (time bar is a percentage calibrated time bar and progressed

time is displayed as a percentage of the total bar)(item 72)(Young col. 10, l. 27-35 & Fig. 10).

Referring to claim **9**, the combination of Young, Russo et al., and ATSC Digital

Television Standard teaches a method of displaying a program progress time as claimed in claim

8, wherein the time information further comprises a percentage of the remaining program time as

compared with the total program broadcasting time (time bar is a percentage calibrated time bar

and remaining time is displayed as a percentage of the total bar)(item 72)(Young col. 10, l. 27-35

& Fig. 10).

Referring to claim **10**, the combination of Young, Russo et al., and ATSC Digital

Television Standard teaches a method of displaying a program progress time as claimed in claim

1, wherein the commonly usable command of the signal receiver is a command for a channel

up/down (items 136)(Young col. 8, l. 46-65; col. 10, l. 20-40; & Figs. 10, 21).

Referring to claim **11**, the combination of Young, Russo et al., and ATSC Digital

Television Standard teaches a method of displaying a program progress time as claimed in claim

1, wherein the commonly usable command of the signal receiver is a command for a remote

controller event (item 212)(Young col. 10, l. 20-40 & Figs. 10, 22B).

Referring to claim **12**, Young discloses a method of displaying a program progress time

(item 72) on a signal receiver (Fig. 10) which receives and processes program guide information

containing a program schedule (col. 17, l. 37-44), comprising:

- storing the program guide information (to a schedule memory)(item 232)(col. 17, l.

  37-44 & Fig. 22A);

- displaying time information, in a numerical format (the examiner interprets item 72 to

  be displayed in numerical format, since program progress is displayed as a

  fraction/percent of the bar representing total program duration), about a currently

  viewed program on the signal receiver when a user issues a display command set the

  time information (user uses a Select command for displaying the information)(col. 10,

  l. 20-40 & Fig. 10) including a beginning time with respect to the currently viewed

  program, a program terminating time of the currently viewed program, and a current

  time with respect to the currently viewed program;

- displaying a display bar representing a total program broadcasting time of the

  currently viewed program (item 72 is a percentage calibrated time bar, where S

  indicates a beginning time, F indicates a finishing time, and current time is indicated

  by a vertical line within the bar. Current time is additionally indicated in 62 as

  11:00A)(col. 10, l. 20-40 & Fig. 10); and

- judging that the command for displaying the program progress time is issued by the

  user so as to automatically display the program progress time at a preset time set by

the user prior to a program terminating time of the currently viewed program (user

uses a Select command for displaying the information about the currently viewed

program)(col. 10, l. 20-40 & Fig. 10), wherein the time information and display bar

are displayed transiently for a predetermined time when the user issues the display

command and disappear after said predetermined time has elapsed, without a user

input after the user issues the display command (the examiner notes that the time bar

72 is displayed until the user presses Select again (see Fig. 11) or until two seconds

have expired (col. 27, l. 34-38). That is, the system is configured to display the time

bar until the time at which a user presses the Select button again or until two seconds

have expired. The examiner interprets this as displaying the time bar transiently for a

predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically disclose that the beginning time is below a left-most end of the

display bar, the program terminating time is below a right-most end of the display bar, and the

current time is below the display bar at a position corresponding to the program progress time.

Russo et al. discloses a graphical display bar indicating progress time of a video program

currently being received (col. 9, l. 32-51 & Fig. 2C). The width of the bar is fixed and indicative

of the program length, and is divided up into a left-hand already received and recorded portion

242 and a right-hand yet-to-be received and recorded portion 244, separated by a delineation 246

indicative of current time. Thus, as the program is received and recorded, the boundary 246 will

slowly move from left to right to convey to a viewer that a larger and larger percentage of the

incoming program is being stored. The examiner further notes that the begin time is displayed

with numerical characters below a left-most end of the display bar, the end time is displayed with

numerical characters below a right-most end of the display bar, and the current time is displayed

below the display bar at a position corresponding to the current time (col. 9, l. 32-51 & Fig. 2C).

It would have been obvious to one of ordinary skill in the art at the time that the invention was

made to modify the time bar of Young to display beginning time in numerical characters below a

left-most end of the display bar, ending time in numerical characters below a right-most end of

the display bar, and current time in numerical characters below a position of the display bar

corresponding to the current time, such as that taught by Russo et al. in order to provide

convenient facilities to communicate playback progress and to mark points of interest to the user

(Russo et al. col. 2, l. 17-21).

The combination of Young and Russo et al. does not specifically teach receiving an

Advanced Television Standards Committee (ATSC) digital television signal in a transport stream

packet transmitted from a broadcasting station, parsing program information of a plurality of

television programs from the received signal, and retrieving program guide information from the

parsed program information. ATSC Digital Television Standard discloses a digital television

standard designed to transmit high quality video and audio over a single 6 MHz channel (p. 18,

Section 5.1 Objectives). ATSC Digital Television Standard further discloses receiving the

ATSC signal (p. 19, Figure 5.1). ATSC Digital Television Standard discloses that video, audio,

ancillary data, and control data are multiplexed by dividing the digital data stream into packets of

information by employing the MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure

5.1). ATSC Digital Television Standard also discloses that an interactive program guide

database may be transmitted in the transport stream, which allows a receiver to build an on-

screen grid of program information and contains control information to facilitate navigation (p.

42, Section 5.6.1.1 Master program guide PID). It would have been obvious to one of ordinary

skill in the art at the time that the invention was made to modify the combination of Young and

Russo et al. to receive ATSC digital television signals and parse program guide information from

the signals, such as that taught by ATSC Digital Television Standard in order to increase

efficiency in utilizing available channel capacity (ATSC Digital Television Standard p. 18,

Section 5.1).

Referring to claim **61**, the combination of Young, Russo et al., and ATSC Digital

Television Standard teaches a method of displaying a program progress time as claimed in claim

1, further comprising moving the current time relative to the display bar according to the

program progress time (elapsed time is indicated by the percentage calibrated time bar)(item

72)(Fig. 10).

9.   Claims **13-17**, **20**, **23-25**, **33**, **35**, **59**, **62**, **63** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Young in view of ATSC Digital Television Standard A/53.

Referring to claim **13**, Young discloses a method of displaying a program progress time

(item 72) in a signal receiver (Fig. 10) which receives and processes program guide information

containing a program schedule (col. 17, l. 37-44), comprising:

- receiving and storing the program guide information (to a schedule memory)(item

  232)(col. 17, l. 37-44 & Fig. 22A);

- displaying a program terminating time of the currently viewed program (item 72 is a

  percentage calibrated time bar, where F indicates a finishing time)(col. 10, l. 20-40 &

  Fig. 10);

- determining a total program broadcasting time of a currently viewed program by

  subtracting a program beginning time from the program terminating time of the

  currently viewed program when a user issues a command requesting the displaying of

  the program progress time of the currently viewed program (item 72)(user uses a

  Select command to display a program bar representing the duration of the program

  from start to finish)(col. 10, l. 20-40 & Fig. 10);

- determining the program progress time by subtracting the beginning time from a

  current time (time bar is a percentage calibrated time bar and progressed time is

  displayed as a percentage of the total bar)(item 72)(col. 10, l. 27-35 & Fig. 10);

- displaying a display bar representing the total program broadcasting time, including

  the current time (item 72)(Fig. 10); and

- automatically displaying the display bar so as to indicate a position on the display bar

  corresponding to the program progress time at a preset time set by the user (user uses

  a Select command for displaying the information. Progress time is indicated by a

  vertical line within the bar)(col. 10, l. 20-40 & Fig. 10), wherein the program

  terminating time, total program broadcasting time, and display bar are displayed

  transiently for a predetermined time when the user issues the command and

  automatically disappear after said predetermined time has elapsed, without a user

  input after the user issues the command (the examiner notes that the time bar 72 is

  displayed until the user presses Select again (see Fig. 11) or until two seconds have

  expired (col. 27, l. 34-38). That is, the system is configured to display the time bar

  until the time at which a user presses the Select button again or until two seconds

have expired, at which time the CPU automatically causes the display bar to

disappear. The examiner interprets this as displaying the time bar transiently for a

predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically teach receiving an Advanced Television Standards Committee

(ATSC) digital television signal in a transport stream packet transmitted from a broadcasting

station, parsing program information of a plurality of television programs from the received

signal, and retrieving program guide information from the parsed program information. ATSC

Digital Television Standard discloses a digital television standard designed to transmit high

quality video and audio over a single 6 MHz channel (p. 18, Section 5.1 Objectives). ATSC

Digital Television Standard further discloses receiving the ATSC signal (p. 19, Figure 5.1).

ATSC Digital Television Standard discloses that video, audio, ancillary data, and control data are

multiplexed by dividing the digital data stream into packets of information by employing the

MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure 5.1). ATSC Digital Television

Standard also discloses that an interactive program guide database may be transmitted in the

transport stream, which allows a receiver to build an on-screen grid of program information and

contains control information to facilitate navigation (p. 42, Section 5.6.1.1 Master program guide

PID). It would have been obvious to one of ordinary skill in the art at the time that the invention

was made to modify Young to receive ATSC digital television signals and parse program guide

information from the signals, such as that taught by ATSC Digital Television Standard in order

to increase efficiency in utilizing available channel capacity (ATSC Digital Television Standard

p. 18, Section 5.1).

Referring to claim **14**, the combination of Young and ATSC Digital Television Standard teaches a method of displaying a program progress time as claimed in claim 13, further comprising displaying the display bar by distinguishing between a portion of the program progress time elapsed and a remaining program progress time portion (time elapsed is represented in gray, while time remaining is represented in white)(item 72)(Young Fig. 10).

Referring to claim **15**, the combination of Young and ATSC Digital Television Standard teaches a method of displaying a program progress time as claimed in claim 14, further comprising displaying the program progress time on a portion of the display bar between a starting position of the display bar and a position corresponding to the program progress time on the display bar (program progress time is indicated by gray bar between S and vertical line)(item 72)(Young Fig. 10).

Referring to claim **16**, the combination of Young and ATSC Digital Television Standard teaches a method of displaying a program progress time as claimed in claim 14, comprising displaying the remaining program progress time on a portion of the display bar between a position corresponding to the program progress time and an end position of the display bar (remaining time is indicated by white bar between vertical line and F)(item 72)(Young Fig. 10).

Referring to claim **17**, Young discloses a method of displaying a program progress time (item 72) of a currently viewed program of a signal receiver (Fig. 10), the method comprising:

- receiving program guide information including a program schedule having the currently viewed program (col. 17, l. 37-44 & Figs. 10, 22A); and
- automatically displaying the program progress time of the currently viewed program simultaneously with the currently viewed program in response to a command from a

user to perform a function other than displaying the program progress time upon

receipt of the command (user uses a Select command or changes channels for

displaying items 62, 70)(col. 8, l. 45-67; col. 9, l. 1-10; col. 10, l. 20-40; & Figs. 10,

11, 21), the program progress time including a current time (vertical line in time

bar)(item 72)(Fig. 10), the command being one of an activating a channel up/down

key (Fig. 11) and setting of a preset time prior to a program termination of the

currently viewed program (user Select command), wherein the program progress time

is displayed transiently for a predetermined time in response to the command from

the user and automatically disappears after said predetermined time has elapsed,

without a user input after the command from the user (the examiner notes that the

time bar 72 is displayed until the user presses Select again (see Fig. 11) or until two

seconds have expired (col. 27, l. 34-38). That is, the system is configured to display

the time bar until the time at which a user presses the Select button again or until two

seconds have expired, at which time the CPU automatically causes the display bar to

disappear. The examiner interprets this as displaying the time bar transiently for a

predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically teach receiving an Advanced Television Standards Committee

(ATSC) digital television signal in a transport stream packet transmitted from a broadcasting

station, parsing program information of a plurality of television programs from the received

signal, and retrieving program guide information from the parsed program information. ATSC

Digital Television Standard discloses a digital television standard designed to transmit high

quality video and audio over a single 6 MHz channel (p. 18, Section 5.1 Objectives). ATSC

Digital Television Standard further discloses receiving the ATSC signal (p. 19, Figure 5.1).

ATSC Digital Television Standard discloses that video, audio, ancillary data, and control data are

multiplexed by dividing the digital data stream into packets of information by employing the

MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure 5.1). ATSC Digital Television

Standard also discloses that an interactive program guide database may be transmitted in the

transport stream, which allows a receiver to build an on-screen grid of program information and

contains control information to facilitate navigation (p. 42, Section 5.6.1.1 Master program guide

PID). It would have been obvious to one of ordinary skill in the art at the time that the invention

was made to modify Young to receive ATSC digital television signals and parse program guide

information from the signals, such as that taught by ATSC Digital Television Standard in order

to increase efficiency in utilizing available channel capacity (ATSC Digital Television Standard

p. 18, Section 5.1).

Referring to claim **20**, the combination of Young and ATSC Digital Television Standard

teaches the method as claimed in claim 17, further comprising:

- generating a setup display (item 62)(Young col. 10, l. 27-40 & Figs. 10, 11) for the

  user to designate ones of a plurality of commands to function as the command to

  perform the function other than displaying the program progress time upon receipt of

  the command (title note 62 is displayed. If user presses Select, notes are displayed.

  User presses Select command out of plurality of remote control commands)(Young

  Fig. 21); and

- receiving inputs from the user designating the ones of the plurality of the command to

   function as the command to perform the function other than displaying the program

   progress time upon receipt of the command (Young col. 10, l. 27-40 & Figs. 11, 21).

Referring to claim **23**, the combination of Young and ATSC Digital Television Standard

teaches the method as claimed in claim 17, wherein the program progress time further includes a

program beginning time (S), and a program termination time (F) of the currently viewed program

(item 72)(Young Fig. 10).

Referring to claim **24**, the combination of Young and ATSC Digital Television Standard

teaches the method as claimed in claim 23, wherein the program progress time further includes a

channel number (CH 2)(item 62), a name of a broadcast station (KNTV-FOX)(item 62) and a

title of the currently viewed program (COSBY SHOW)(Young Fig. 10).

Referring to claim **25**, the combination of Young and ATSC Digital Television Standard

teaches the method as claimed in claim 23, wherein said displaying comprises displaying the

program beginning time at a start of a display bar (S), the program termination time at an end of

the display bar (F), and the current time at a position of the display bar corresponding to a

percentage of time elapsed versus a total time of the currently viewed program (vertical

line)(item 72 is a percentage calibrated bar)(Young col. 10, l. 20-40 & Fig. 10).

Referring to claim **33**, Young discloses a method of displaying a program progress time

(item 72) on a signal receiver (Fig. 10) which receives and processes program guide information

containing a program schedule (col. 17, l. 37-44), comprising:

- storing the program guide information (to a schedule memory)(item 232)(col. 17, l.

   37-44 & Fig. 22A);

-   displaying time information about a currently viewed program together with the

    currently viewed program on the signal receiver when a user issues a display

    command set (user uses a Select command for displaying the information)(col. 8, l.

    66-67; col. 9, l. 1-10; col. 10, l. 20-40; & Figs. 10, 11), the time information including

    a beginning time (S)(item 72)(Fig. 10), a current time (vertical line)(item 72)(Fig.

    10), and a terminating time of the currently viewed program (F)(item 72)(Fig. 10);

    and

-   automatically displaying next program information when the time information

    reaches a preset terminating time (the examiner notes that when the remaining time

    reaches zero, the next broadcast program comes on. The examiner interprets this as

    automatically displaying next program information when a remaining program time

    reaches a preset time), wherein said time information is displayed transiently for a

    predetermined time when the user issues the display command and automatically

    disappears after said predetermined time has elapsed, without a user input after the

    user issues the display command (the examiner notes that the time bar 72 is displayed

    until the user presses Select again (see Fig. 11) or until two seconds have expired

    (col. 27, l. 34-38). That is, the system is configured to display the time bar until the

    time at which a user presses the Select button again or until two seconds have

    expired, at which time the CPU automatically causes the display bar to disappear.

    The examiner interprets this as displaying the time bar transiently for a predetermined

    time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically teach receiving an Advanced Television Standards Committee

(ATSC) digital television signal in a transport stream packet transmitted from a broadcasting

station, parsing program information of a plurality of television programs from the received

signal, and retrieving program guide information from the parsed program information. ATSC

Digital Television Standard discloses a digital television standard designed to transmit high

quality video and audio over a single 6 MHz channel (p. 18, Section 5.1 Objectives). ATSC

Digital Television Standard further discloses receiving the ATSC signal (p. 19, Figure 5.1).

ATSC Digital Television Standard discloses that video, audio, ancillary data, and control data are

multiplexed by dividing the digital data stream into packets of information by employing the

MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure 5.1). ATSC Digital Television

Standard also discloses that an interactive program guide database may be transmitted in the

transport stream, which allows a receiver to build an on-screen grid of program information and

contains control information to facilitate navigation (p. 42, Section 5.6.1.1 Master program guide

PID). It would have been obvious to one of ordinary skill in the art at the time that the invention

was made to modify Young to receive ATSC digital television signals and parse program guide

information from the signals, such as that taught by ATSC Digital Television Standard in order

to increase efficiency in utilizing available channel capacity (ATSC Digital Television Standard

p. 18, Section 5.1).

Referring to claim **35**, Young discloses a method of displaying a program progress time

(item 72) on a signal receiver (Fig. 10) which receives and processes program guide information

containing a program schedule (col. 17, l. 37-44), the method comprising:

- storing the program guide information (to a schedule memory)(item 232)(col. 17, l. 37-44 & Fig. 22A); and

- displaying time information about a currently viewed program together with the currently viewed program (item 72)(Fig. 10) and next program information automatically at a preset terminating time of the currently viewed program (the examiner notes that when the remaining time reaches zero, the next broadcast program comes on. The examiner interprets this as automatically displaying next program information when a remaining program time reaches a preset time), the time information comprising a beginning time (S)(item 72)(Fig. 10) with respect to the currently viewed program, the program progress time including a current time (vertical line)(item 72)(Fig. 10), wherein said time information is displayed transiently for a predetermined time in response to a display command set by a user and automatically disappears after said predetermined time has elapsed, without a user input after the user sets the display command (the examiner notes that the time bar 72 is displayed until the user presses Select again (see Fig. 11) or until two seconds have expired (col. 27, l. 34-38). That is, the system is configured to display the time bar until the time at which a user presses the Select button again or until two seconds have expired, at which time the CPU automatically causes the display bar to disappear. The examiner interprets this as displaying the time bar transiently for a predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically teach receiving an Advanced Television Standards Committee (ATSC) digital television signal in a transport stream packet transmitted from a broadcasting

station, parsing program information of a plurality of television programs from the received

signal, and retrieving program guide information from the parsed program information. ATSC

Digital Television Standard discloses a digital television standard designed to transmit high

quality video and audio over a single 6 MHz channel (p. 18, Section 5.1 Objectives). ATSC

Digital Television Standard further discloses receiving the ATSC signal (p. 19, Figure 5.1).

ATSC Digital Television Standard discloses that video, audio, ancillary data, and control data are

multiplexed by dividing the digital data stream into packets of information by employing the

MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure 5.1). ATSC Digital Television

Standard also discloses that an interactive program guide database may be transmitted in the

transport stream, which allows a receiver to build an on-screen grid of program information and

contains control information to facilitate navigation (p. 42, Section 5.6.1.1 Master program guide

PID). It would have been obvious to one of ordinary skill in the art at the time that the invention

was made to modify Young to receive ATSC digital television signals and parse program guide

information from the signals, such as that taught by ATSC Digital Television Standard in order

to increase efficiency in utilizing available channel capacity (ATSC Digital Television Standard

p. 18, Section 5.1).

Referring to claim **59**, Young discloses a method of displaying a current program, time

information of the current program in a television receiver (Fig. 10), the method comprising:

- receiving a television signal transmitted from a broadcasting station (col. 17, l. 28-30);

- parsing program information of a plurality of television programs from the received

signal (col. 17, l. 30-45);

- retrieving program guide information from the parsed program information (col. 17, l.

45-56);

- identifying a start time of a current television program based on the retrieved program

guide information (Figs. 1-3);

- processing video data of the current television program and the program guide

information including at least the identified start time to be applied to a display (col. 10,

l. 20-40 & Figs. 9, 10).

Young does not specifically disclose that the received television signal is an Advanced

Television Standards Committee (ATSC) digital television signal in a transport stream packet

transmitted from a broadcasting station. ATSC Digital Television Standard discloses a digital

television standard designed to transmit high quality video and audio over a single 6 MHz

channel (p. 18, Section 5.1 Objectives). ATSC Digital Television Standard further discloses

receiving the ATSC signal (p. 19, Figure 5.1). ATSC Digital Television Standard discloses that

video, audio, ancillary data, and control data are multiplexed by dividing the digital data stream

into packets of information by employing the MPEG-2 transport stream syntax (p. 19, paragraph

2 & Figure 5.1). ATSC Digital Television Standard also discloses that an interactive program

guide database may be transmitted in the transport stream, which allows a receiver to build an

on-screen grid of program information and contains control information to facilitate navigation

(p. 42, Section 5.6.1.1 Master program guide PID). It would have been obvious to one of

ordinary skill in the art at the time that the invention was made to modify Young to receive

ATSC digital television signals and parse program guide information from the signals, such as

that taught by ATSC Digital Television Standard in order to increase efficiency in utilizing

available channel capacity (ATSC Digital Television Standard p. 18, Section 5.1).

Referring to claim **62**, the combination of Young and ATSC Digital Television Standard

teaches the method of claim 59, further comprising:

- converting an IF signal from a tuner of the receiver into a baseband signal (RF Mod

  2028)(Young Fig. 24); and

- converting the baseband signal into a channel signal to reconstruct a transport stream

  (as reproduced by audio and video on TV)(TS)(Young Fig. 24).

Referring to claim **63**, the combination of Young and ATSC Digital Television Standard

teaches the method of claim 62, further comprising identifying time information indicating a

length of a television program based on the retrieved program guide information (Young col. 10,

l. 20-40 & Fig. 10).

10.   Claims **21**, **34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Young in

view of Ellis et al., and further in view of ATSC Digital Television Standard A/53.

Referring to claim **21**, Young discloses a method of displaying a program progress time

(item 72) of a currently viewed program of a signal receiver (Fig. 10), the method comprising:

- receiving program guide information including a program schedule having the

  currently viewed program (col. 17, l. 37-44 & Figs. 10, 22A);

- displaying a program progress time including a current time (vertical line in time

  bar)(item 72)(Fig. 10) of the currently viewed program in response to a command

  from a user to perform a function other than displaying the program progress time

upon receipt of the command (user uses a Select command or changes channels for

displaying items 62, 70)(col. 8, l. 45-67; col. 9, l. 1-10; col. 10, l. 20-40; & Figs. 10,

11, 21); and

- automatically displaying next program information of a next program on a same

    channel as the currently viewed program (the examiner notes that when the remaining

    time reaches zero, the next broadcast program comes on. The examiner interprets this

    as automatically displaying next program information when a remaining program

    time reaches a preset time), wherein the program progress time is displayed

    transiently for a predetermined time in response to the command from the user and

    automatically disappears after said predetermined time has elapsed, without a user

    input after the command from the user (the examiner notes that the time bar 72 is

    displayed until the user presses Select again (see Fig. 11) or until two seconds have

    expired (col. 27, l. 34-38). That is, the system is configured to display the time bar

    until the time at which a user presses the Select button again or until two seconds

    have expired, at which time the CPU automatically causes the display bar to

    disappear. The examiner interprets this as displaying the time bar transiently for a

    predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically disclose that next program information is displayed at a preset time

prior to the program termination of the currently viewed program and that the next program

information is displayed transiently for a predetermined time in response to the command from

the user and disappears after said predetermined time has elapsed. Ellis et al. discloses a

program BROWSE mode that displays an overlay portion 111 describing the program currently

playing on the current channel (col. 13, l. 19-30 & Figs. 7, 8). Ellis et al. further discloses that,

while viewing the program schedule information for a currently viewed program, the user can

press a right direction arrow to display future program schedule information for the channel

currently being viewed (col. 13, l. 19-30 & Fig. 8A). Ellis et al. further discloses that the user

may exit the BROWSE mode by depressing the MODE key twice (col. 13, l. 6-11). It would

have been obvious to one of ordinary skill in the art at the time that the invention was made to

modify to the program notes display of Young to allow a user to view program notes about the

next program on the channel, and to allow the user to move between program notes about the

currently viewed program and the next program until the user exits the mode, such as that taught

by Ellis et al. in order to allow a user to create a viewing itinerary while still viewing a program

currently appearing on a television receiver (Ellis et al. col. 1, l. 53-56). Ellis et al. further

discloses that the user may set a REMINDER message to remind the viewer about the future

program at a predetermined time before the start of the future program (col. 13, l. 54-67; col. 14,

l. 1-26; & Figs. 9A, 9B). It would have been obvious to one of ordinary skill in the art at the

time that the invention was made to modify the program notes display of Young to display a

reminder about an upcoming program on the same channel, such as that taught by Ellis et al. in

order to allow a user to create a viewing itinerary while still viewing a program currently

appearing on a television receiver (Ellis et al. col. 1, l. 53-56).

The combination of Young and Ellis et al. does not specifically teach receiving an

Advanced Television Standards Committee (ATSC) digital television signal in a transport stream

packet transmitted from a broadcasting station, parsing program information of a plurality of

television programs from the received signal, and retrieving program guide information from the

parsed program information. ATSC Digital Television Standard discloses a digital television

standard designed to transmit high quality video and audio over a single 6 MHz channel (p. 18,

Section 5.1 Objectives). ATSC Digital Television Standard further discloses receiving the

ATSC signal (p. 19, Figure 5.1). ATSC Digital Television Standard discloses that video, audio,

ancillary data, and control data are multiplexed by dividing the digital data stream into packets of

information by employing the MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure

5.1). ATSC Digital Television Standard also discloses that an interactive program guide

database may be transmitted in the transport stream, which allows a receiver to build an on-

screen grid of program information and contains control information to facilitate navigation (p.

42, Section 5.6.1.1 Master program guide PID). It would have been obvious to one of ordinary

skill in the art at the time that the invention was made to modify the combination of Young and

Ellis et al. to receive ATSC digital television signals and parse program guide information from

the signals, such as that taught by ATSC Digital Television Standard in order to increase

efficiency in utilizing available channel capacity (ATSC Digital Television Standard p. 18,

Section 5.1).

Referring to claim **34**, Young discloses a method of outputting a program progress time

(item 72) information to a display (Fig. 10), comprising:

- receiving program guide information containing a program schedule (col. 17, l. 37-44

  & Fig. 22A);

- storing the program guide information (to a schedule memory)(item 232)(col. 17, l.

  37-44 & Fig. 22A);

- outputting the program progress time information (item 72)(Fig. 10) about a currently

    viewed program together with the currently viewed program on the display when a

    user issues a display command set (Select)(col. 10, l. 20-40 & Figs. 10, 11), the

    program progress time information including a beginning time (S)(item 72)(Fig. 10),

    a current time (vertical line)(item 72)(Fig. 10), and a terminating time (F) of the

    currently viewed program (item 72)(Fig. 10); and

- displaying the time information when the current time reaches a preset terminating

    time of the currently viewed program (when the user presses Select), wherein said

    time information is displayed transiently for a predetermined time when the user

    issues the display command and automatically disappears after said predetermined

    time has elapsed, without a user input after the user issues the display command (the

    examiner notes that the time bar 72 is displayed until the user presses Select again

    (see Fig. 11) or until two seconds have expired (col. 27, l. 34-38). That is, the system

    is configured to display the time bar until the time at which a user presses the Select

    button again or until two seconds have expired, at which time the CPU automatically

    causes the display bar to disappear. The examiner interprets this as displaying the

    time bar transiently for a predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; &

    Fig. 11).

Young does not specifically disclose displaying next information at the preset time. Ellis et al.

discloses a program BROWSE mode that displays an overlay portion 111 describing the program

currently playing on the current channel (col. 13, l. 19-30 & Figs. 7, 8). Ellis et al. further

discloses that, while viewing the program schedule information for a currently viewed program,

the user can press a right direction arrow to display future program schedule information for the

channel currently being viewed (col. 13, l. 19-30 & Fig. 8A). It would have been obvious to one

of ordinary skill in the art at the time that the invention was made to modify to the program notes

display of Young to allow a user to view program notes about the next program on the channel,

and to allow the user to move between program notes about the currently viewed program and

the next program until the user exits the mode, such as that taught by Ellis et al. in order to allow

a user to create a viewing itinerary while still viewing a program currently appearing on a

television receiver (Ellis et al. col. 1, l. 53-56). Ellis et al. further discloses that the user may set

a REMINDER message to remind the viewer about the future program at a predetermined time

before the start of the future program (col. 13, l. 54-67; col. 14, l. 1-26; & Figs. 9A, 9B). It

would have been obvious to one of ordinary skill in the art at the time that the invention was

made to modify the program notes display of Young to display a reminder about an upcoming

program on the same channel, such as that taught by Ellis et al. in order to allow a user to create

a viewing itinerary while still viewing a program currently appearing on a television receiver

(Ellis et al. col. 1, l. 53-56).

The combination of Young and Ellis et al. does not specifically teach receiving an

Advanced Television Standards Committee (ATSC) digital television signal in a transport stream

packet transmitted from a broadcasting station, parsing program information of a plurality of

television programs from the received signal, and retrieving program guide information from the

parsed program information. ATSC Digital Television Standard discloses a digital television

standard designed to transmit high quality video and audio over a single 6 MHz channel (p. 18,

Section 5.1 Objectives). ATSC Digital Television Standard further discloses receiving the

ATSC signal (p. 19, Figure 5.1). ATSC Digital Television Standard discloses that video, audio,

ancillary data, and control data are multiplexed by dividing the digital data stream into packets of

information by employing the MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure

5.1). ATSC Digital Television Standard also discloses that an interactive program guide

database may be transmitted in the transport stream, which allows a receiver to build an on-

screen grid of program information and contains control information to facilitate navigation (p.

42, Section 5.6.1.1 Master program guide PID). It would have been obvious to one of ordinary

skill in the art at the time that the invention was made to modify the combination of Young and

Ellis et al. to receive ATSC digital television signals and parse program guide information from

the signals, such as that taught by ATSC Digital Television Standard in order to increase

efficiency in utilizing available channel capacity (ATSC Digital Television Standard p. 18,

Section 5.1).

11.   Claim **22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of

ATSC Digital Television Standard A/53, and further in view of Ellis et al.

        Referring to claim **22**, the combination of Young and ATSC Digital Television Standard

teaches the method as claimed in claim 17, further comprising:

-   generating a setup display (item 62)(Young col. 10, l. 27-40 & Figs. 10, 11) for the

    user to designate ones of a plurality of commands to function as the command to

    perform the function other than displaying the program progress time upon receipt of

    the command, wherein the plurality of commands further comprises displaying the

    program progress time at the preset time prior to a program termination of the

currently viewed program (title note 62 is displayed. If user presses Select, notes are

displayed. User presses Select command out of plurality of remote control

commands)(Young Fig. 21); and

- receiving inputs from the user designating whether the ones of the plurality of

   commands are to function as the command to perform the function other than

   displaying the program progress time upon receipt of the command (Young col. 10, l.

   27-40 & Figs. 11, 21).

The combination of Young and ATSC Digital Television Standard does not specifically teach

that the user provide a command at the setup menu for displaying next program information on a

same channel as the currently viewed program at the preset time and displaying the next program

information at the preset time if the first and the another commands are set by the user positively.

Ellis et al. discloses a program BROWSE mode that displays an overlay portion 111 describing

the program currently playing on the current channel (col. 13, l. 19-30 & Figs. 7, 8). Ellis et al.

further discloses that, while viewing the program schedule information for a currently viewed

program, the user can press a right direction arrow to display future program schedule

information for the channel currently being viewed (col. 13, l. 19-30 & Fig. 8A). It would have

been obvious to one of ordinary skill in the art at the time that the invention was made to modify

the program notes display in the combination of Young and ATSC Digital Television Standard to

allow the user to press a right direction arrow to display future program schedule information for

the channel currently being viewed, such as that taught by Ellis et al. in order to allow a user to

create a viewing itinerary while still viewing a program currently appearing on a television

receiver (Ellis et al. col. 1, l. 53-56).

12.   Claims **26**, **27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Young in

view of Sony Digital Satellite Receiver SAT-A1, and further in view of ATSC Digital Television

Standard A/53.

Referring to claim **26**, Young discloses a method of displaying a program progress time

(item 72) including a program beginning time (S)(item 72), a current time (vertical line)(item

72), and a program terminating time (F)(item 72) of a currently viewed program of a signal

receiver (Fig. 10), the method comprising:

-      receiving program guide information including a program schedule having the

       currently viewed program (col. 17, l. 37-44 & Figs. 10, 22A);

-      displaying the program progress time of the currently viewed program simultaneously

       with the currently viewed program automatically at a preset time (user uses a Select

       command for displaying the information)(col. 8, l. 66-67; col. 9, l. 1-10; & Fig. 10)

       wherein said displaying the program progress time further comprises displaying the

       beginning time at a start of a display bar (S)(item 72)(Fig. 10), the program

       termination time at an end of the display bar (F)(item 72)(Fig. 10), a first percentage

       number of the time elapsed (gray part of bar) and a second percentage number of a

       time remaining (white part of bar) versus the total time of the currently viewed

       program and the current time at a position of the display bar corresponding to a

       percentage of time elapsed versus a total time of the currently viewed program

       (vertical line)(item 72)(Fig. 10), wherein the program progress time, first percentage

       number, and second percentage number are displayed transiently for a predetermined

time when a user issues a display command set in said setting a command and

disappear after said predetermined time has elapsed, without a user input after the

user issues the display command (the examiner notes that the time bar 72 is displayed

until the user presses Select again (see Fig. 11) or until two seconds have expired

(col. 27, l. 34-38). That is, the system is configured to display the time bar until the

time at which a user presses the Select button again or until two seconds have

expired. The examiner interprets this as displaying the time bar transiently for a

predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically disclose displaying the percentage numbers as numerals. Sony

Digital Satellite Receiver SAT-A1 Operating Instructions discloses a technique of displaying a

status progress bar with numerical characters indicating the percentage completed (8% here). It

would have been obvious to one of ordinary skill in the art at the time that the invention was

made to modify the percent completed (gray part of bar) and percent remaining (white part of

bar) of the percentage calibrated time bar of Young to display the precise percentages in

numerical characters, such as that taught by Sony Digital Receiver SAT-A1 in order to offer a

more precise visual notification to users about progress made and time remaining.

The combination of Young and Sony Digital Receiver SAT-A1 does not specifically

teach receiving an Advanced Television Standards Committee (ATSC) digital television signal

in a transport stream packet transmitted from a broadcasting station, parsing program

information of a plurality of television programs from the received signal, and retrieving

program guide information from the parsed program information. ATSC Digital Television

Standard discloses a digital television standard designed to transmit high quality video and audio

over a single 6 MHz channel (p. 18, Section 5.1 Objectives). ATSC Digital Television Standard

further discloses receiving the ATSC signal (p. 19, Figure 5.1). ATSC Digital Television

Standard discloses that video, audio, ancillary data, and control data are multiplexed by dividing

the digital data stream into packets of information by employing the MPEG-2 transport stream

syntax (p. 19, paragraph 2 & Figure 5.1). ATSC Digital Television Standard also discloses that

an interactive program guide database may be transmitted in the transport stream, which allows a

receiver to build an on-screen grid of program information and contains control information to

facilitate navigation (p. 42, Section 5.6.1.1 Master program guide PID). It would have been

obvious to one of ordinary skill in the art at the time that the invention was made to modify the

combination of Young and Sony Digital Receiver SAT-A1 to receive ATSC digital television

signals and parse program guide information from the signals, such as that taught by ATSC

Digital Television Standard in order to increase efficiency in utilizing available channel capacity

(ATSC Digital Television Standard p. 18, Section 5.1).

Referring to claim **27**, Young discloses a method of displaying a program progress time

(item 72) having a program beginning time (S)(item 72), a current time (vertical line)(item 72),

and a program terminating time (F)(item 72) of a currently viewed program of a signal receiver

(Fig. 10), the method comprising:

- receiving program guide information including a program schedule having the

    currently viewed program (col. 17, l. 37-44 & Figs. 10, 22A); and

- displaying the program progress time of the currently viewed program in response to

    a command from a user to perform a function other than displaying the program

    progress time upon receipt of the command (user uses a Select command or changes

channels for displaying items 62, 70)(col. 8, l. 45-67; col. 9, l. 1-10; col. 10, l. 20-40;

& Figs. 10, 11, 21) wherein said displaying the program progress time further

comprises displaying the beginning time at a start of a display bar (S)(item 72)(Fig.

10), the program termination time at end of the display bar (F)(item 72)(Fig. 10), and

the current time at a position of the display bar corresponding to a percentage of time

elapsed versus a total time of the currently viewed program (vertical line)(item

72)(Fig. 10) and the command is to display the program progress time automatically

at a preset time prior to a program termination of the currently viewed program (user

uses a Select command for displaying the information)(col. 8, l. 66-67; col. 9, l. 1-10;

& Fig. 10), wherein the program progress time, a first percentage number, and a

second percentage number are displayed transiently for a predetermined time in

response to the command from the user and automatically disappear after said

predetermined time has elapsed, without a user input after the command (the

examiner notes that the time bar 72 is displayed until the user presses Select again

(see Fig. 11) or until two seconds have expired (col. 27, l. 34-38). That is, the system

is configured to display the time bar until the time at which a user presses the Select

button again or until two seconds have expired, at which time the CPU automatically

causes the display bar to disappear. The examiner interprets this as displaying the

time bar transiently for a predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; &

Fig. 11).

Furthermore, the technique of displaying a progressive time bar together with numerical

characters displaying the precise percentage amount indicated by the progressive bar is known in

the prior art. In fact, the Sony Digital Satellite Receiver SAT-A1 Operating Instructions

discloses a technique of displaying a status progress bar with numerical characters indicating the

percentage completed (8% here). It would have been obvious to one of ordinary skill in the art at

the time that the invention was made to modify the percent completed (gray part of bar) and

percent remaining (white part of bar) of the percentage calibrated time bar of Young to display

the precise percentages in numerical characters, such as that taught by Sony Digital Receiver

SAT-A1 in order to offer a more precise visual notification to users about progress made and

time remaining.

The combination of Young and Sony Digital Receiver SAT-A1 does not specifically

teach receiving an Advanced Television Standards Committee (ATSC) digital television signal

in a transport stream packet transmitted from a broadcasting station, parsing program

information of a plurality of television programs from the received signal, and retrieving

program guide information from the parsed program information. ATSC Digital Television

Standard discloses a digital television standard designed to transmit high quality video and audio

over a single 6 MHz channel (p. 18, Section 5.1 Objectives). ATSC Digital Television Standard

further discloses receiving the ATSC signal (p. 19, Figure 5.1). ATSC Digital Television

Standard discloses that video, audio, ancillary data, and control data are multiplexed by dividing

the digital data stream into packets of information by employing the MPEG-2 transport stream

syntax (p. 19, paragraph 2 & Figure 5.1). ATSC Digital Television Standard also discloses that

an interactive program guide database may be transmitted in the transport stream, which allows a

receiver to build an on-screen grid of program information and contains control information to

facilitate navigation (p. 42, Section 5.6.1.1 Master program guide PID). It would have been

obvious to one of ordinary skill in the art at the time that the invention was made to modify the

combination of Young and Sony Digital Receiver SAT-A1 to receive ATSC digital television

signals and parse program guide information from the signals, such as that taught by ATSC

Digital Television Standard in order to increase efficiency in utilizing available channel capacity

(ATSC Digital Television Standard p. 18, Section 5.1).

13.   Claim **28** is rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of

Ellis et al., further in view of Digital Satellite Receiver SAT-A1, and still further in view of

ATSC Digital Television Standard.

        Referring to claim **28**, Young discloses a device for displaying a program progress time

(item 72)(Fig. 10), comprising:

- a receiving unit to receive a program and a program guide containing a program

    schedule which includes information on a TV program (col. 17, l. 37-44 & Figs. 10,

    22A);

- a processor to produce data for displaying the program progress time transiently for a

    predetermined time in response to a command from a user and video output unit to

    mix video data of the program and said data for displaying the program progress time

    of the program, to output a resulting signal (user uses a Select command or changes

    channels for displaying items 62, 70)(col. 8, l. 45-67; col. 9, l. 1-10; col. 10, l. 20-40;

    & Figs. 10, 11, 21); and

- a display to display the resulting signal automatically at a preset remaining time of the

    program, the program progress time including a program beginning time of the TV

program, a progress percentage number, and a current time (Fig. 10), wherein the

program progress time are displayed transiently for a predetermined time in response

to the command from the user and automatically disappear after said predetermined

time has elapsed, without a user input after the command (the examiner notes that the

time bar 72 is displayed until the user presses Select again (see Fig. 11) or until two

seconds have expired (col. 27, l. 34-38). That is, the system is configured to display

the time bar until the time at which a user presses the Select button again or until two

seconds have expired, at which time the CPU automatically causes the display bar to

disappear. The examiner interprets this as displaying the time bar transiently for a

predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically disclose that next program information is displayed at a preset time

prior to the program termination of the currently viewed program. Ellis et al. discloses a

program BROWSE mode that displays an overlay portion 111 describing the program currently

playing on the current channel (col. 13, l. 19-30 & Figs. 7, 8). Ellis et al. further discloses that,

while viewing the program schedule information for a currently viewed program, the user can

press a right direction arrow to display future program schedule information for the channel

currently being viewed (col. 13, l. 19-30 & Fig. 8A). It would have been obvious to one of

ordinary skill in the art at the time that the invention was made to modify to the program notes

display of Young to allow a user to view program notes about the next program on the channel,

and to allow the user to move between program notes about the currently viewed program and

the next program until the user exits the mode, such as that taught by Ellis et al. in order to allow

a user to create a viewing itinerary while still viewing a program currently appearing on a

television receiver (Ellis et al. col. 1, l. 53-56). Ellis et al. further discloses that the user may set

a REMINDER message to remind the viewer about the future program at a predetermined time

before the start of the future program (col. 13, l. 54-67; col. 14, l. 1-26; & Figs. 9A, 9B). It

would have been obvious to one of ordinary skill in the art at the time that the invention was

made to modify the program notes display of Young to display a reminder about an upcoming

program on the same channel, such as that taught by Ellis et al. in order to allow a user to create

a viewing itinerary while still viewing a program currently appearing on a television receiver

(Ellis et al. col. 1, l. 53-56).

The combination of Young and Ellis et al. does not specifically teach displaying the

percentage numbers as numerals. Sony Digital Satellite Receiver SAT-A1 Operating

Instructions discloses a technique of displaying a status progress bar with numerical characters

indicating the percentage completed (8% here). It would have been obvious to one of ordinary

skill in the art at the time that the invention was made to modify the percent completed (gray part

of bar) and percent remaining (white part of bar) of the percentage calibrated time bar in the

combination of Young and Ellis et al. to display the precise percentages in numerical characters,

such as that taught by Sony Digital Receiver SAT-A1 in order to offer a more precise visual

notification to users about progress made and time remaining.

The combination of Young, Ellis et al., and Sony Digital Receiver SAT-A1 does not

specifically teach receiving an Advanced Television Standards Committee (ATSC) digital

television signal in a transport stream packet transmitted from a broadcasting station, parsing

program information of a plurality of television programs from the received signal, and

retrieving program guide information from the parsed program information. ATSC Digital

Television Standard discloses a digital television standard designed to transmit high quality

video and audio over a single 6 MHz channel (p. 18, Section 5.1 Objectives). ATSC Digital

Television Standard further discloses receiving the ATSC signal (p. 19, Figure 5.1). ATSC

Digital Television Standard discloses that video, audio, ancillary data, and control data are

multiplexed by dividing the digital data stream into packets of information by employing the

MPEG-2 transport stream syntax (p. 19, paragraph 2 & Figure 5.1). ATSC Digital Television

Standard also discloses that an interactive program guide database may be transmitted in the

transport stream, which allows a receiver to build an on-screen grid of program information and

contains control information to facilitate navigation (p. 42, Section 5.6.1.1 Master program guide

PID). It would have been obvious to one of ordinary skill in the art at the time that the invention

was made to modify the combination of Young, Ellis et al., and Sony Digital Receiver SAT-A1

to receive ATSC digital television signals and parse program guide information from the signals,

such as that taught by ATSC Digital Television Standard in order to increase efficiency in

utilizing available channel capacity (ATSC Digital Television Standard p. 18, Section 5.1).

14.   Claim **29** is rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of

Sony Digital Receiver SAT-A1.

        Referring to claim **29**, Young discloses a device for displaying a program progress time

(item 72) the program progress time including a current time and a progress percentage number

(Fig. 10), comprising:

- a receiving unit to receive a TV program and a TV program guide containing a program schedule which includes information on the TV program (col. 17, l. 37-44 & Figs. 10, 22A);

- a user interface to enable entry of a command from a user requesting display of the program progress time (col. 10, l. 20-40 & Figs. 10, 11);

- an audio output unit to generate an audio signal of the TV program (col. 8, l. 64);

- a processor to produce On-Screen-Graphic data for displaying the program progress time transiently for a predetermined time in response to the command from the user and based upon the program schedule (user uses a Select command for displaying the information)(col. 8, l. 66-67; col. 9, l. 1-10; col. 10, l. 20-40; & Figs. 10, 11);

- a video output unit to mix video data of the TV program and On-Screen-Graphic data of the TV program, to output a resulting signal (Fig. 10); and

- a display to automatically display the resulting signal wherein the command is one of an activating a channel up/down key and setting of a preset time prior to a program termination of a currently viewed program (channel up/down or Select)(col. 8, l. 46-65; col. 10, l. 20-40; & Figs. 10, 21), wherein the On-Screen-Graphic data are displayed transiently for a predetermined time in response to the command from the user and automatically disappear after said predetermined time has elapsed, without a user input after the command (the examiner notes that the time bar 72 is displayed until the user presses Select again (see Fig. 11) or until two seconds have expired (col. 27, l. 34-38). That is, the system is configured to display the time bar until the time at which a user presses the Select button again or until two seconds have

expired, at which time the CPU automatically causes the display bar to disappear.

The examiner interprets this as displaying the time bar transiently for a predetermined

time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically teach displaying the percentage numbers as numerals. Sony Digital

Satellite Receiver SAT-A1 Operating Instructions discloses a technique of displaying a status

progress bar with numerical characters indicating the percentage completed (8% here). It would

have been obvious to one of ordinary skill in the art at the time that the invention was made to

modify the percent completed (gray part of bar) and percent remaining (white part of bar) of the

percentage calibrated time bar of Young to display the precise percentages in numerical

characters, such as that taught by Sony Digital Receiver SAT-A1 in order to offer a more precise

visual notification to users about progress made and time remaining.

15.   Claim **30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of

Ellis et al., and further in view of Sony Digital Receiver SAT-A1.

       Referring to claim **30**, Young discloses a device for displaying a program progress time

(item 72) the program progress time including a current time and a progress percentage number

(Fig. 10), comprising:

-    a receiving unit to receive a TV program and a TV program guide containing a

     program schedule which includes information on the TV program (col. 17, l. 37-44 &

     Figs. 10, 22A);

-    a user interface to enable entry of a command from a user requesting display of the

     program progress time (col. 10, l. 20-40 & Figs. 10, 11);

- an audio output unit to generate an audio signal of the TV program (col. 8, l. 64);

- a processor to produce On-Screen-Graphic data for displaying the program progress time transiently for a predetermined time in response to the command from the user and based upon the program schedule (user uses a Select command for displaying the information)(col. 8, l. 66-67; col. 9, l. 1-10; col. 10, l. 20-40; & Figs. 10, 11);

- a video output unit to mix video data of the TV program and On-Screen-Graphic data of the TV program, to output a resulting signal; and

- a display to automatically display the resulting signal (Fig. 10), wherein the On-Screen-Graphic data are displayed transiently for a predetermined time in response to the command from the user and automatically disappear after said predetermined time has elapsed, without a user input after the command (the examiner notes that the time bar 72 is displayed until the user presses Select again (see Fig. 11) or until two seconds have expired (col. 27, l. 34-38). That is, the system is configured to display the time bar until the time at which a user presses the Select button again or until two seconds have expired, at which time the CPU automatically causes the display bar to disappear. The examiner interprets this as displaying the time bar transiently for a predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; & Fig. 11).

Young does not specifically disclose that the processor produces ON-Screen Graphic data for displaying next program information of a next program on a same channel as the TV program at a preset time prior to a program termination of the TV program. Ellis et al. discloses a program BROWSE mode that displays an overlay portion 111 describing the program currently playing on the current channel (col. 13, l. 19-30 & Figs. 7, 8). Ellis et al. further discloses that, while

viewing the program schedule information for a currently viewed program, the user can press a

right direction arrow to display future program schedule information for the channel currently

being viewed (col. 13, l. 19-30 & Fig. 8A). It would have been obvious to one of ordinary skill

in the art at the time that the invention was made to modify to the program notes display of

Young to allow a user to view program notes about the next program on the channel, and to

allow the user to move between program notes about the currently viewed program and the next

program until the user exits the mode, such as that taught by Ellis et al. in order to allow a user to

create a viewing itinerary while still viewing a program currently appearing on a television

receiver (Ellis et al. col. 1, l. 53-56). Ellis et al. further discloses that the user may set a

REMINDER message to remind the viewer about the future program at a predetermined time

before the start of the future program (col. 13, l. 54-67; col. 14, l. 1-26; & Figs. 9A, 9B). It

would have been obvious to one of ordinary skill in the art at the time that the invention was

made to modify the program notes display of Young to display a reminder about an upcoming

program on the same channel, such as that taught by Ellis et al. in order to allow a user to create

a viewing itinerary while still viewing a program currently appearing on a television receiver

(Ellis et al. col. 1, l. 53-56).

The combination of Young and Ellis et al. does not specifically teach displaying the

percentage numbers as numerals. Sony Digital Satellite Receiver SAT-A1 Operating

Instructions discloses a technique of displaying a status progress bar with numerical characters

indicating the percentage completed (8% here). It would have been obvious to one of ordinary

skill in the art at the time that the invention was made to modify the percent completed (gray part

of bar) and percent remaining (white part of bar) of the percentage calibrated time bar in the

combination of Young and Ellis et al. to display the precise percentages in numerical characters,

such as that taught by Sony Digital Receiver SAT-A1 in order to offer a more precise visual

notification to users about progress made and time remaining.

16.   Claim **31** is rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of

Ellis et al.

Referring to claim **31**, Young discloses a method of displaying a program progress time

(item 72) of a currently viewed program (Fig. 10) comprising:

-       issuing a user-initiated display command (Select)(col. 10, l. 20-40 & Figs. 10, 11);

-       displaying a program terminating time (F)(item 72)(Fig. 10) of the currently viewed

        program and a current time (vertical line)(item 72)(Fig. 10) in response to the display

        command automatically at a preset time set by the user prior to a program terminating

        time of the currently viewed program (at the time user presses Select), wherein the

        program progress time is displayed transiently for a predetermined time in response to

        the display command and automatically disappears after said predetermined time has

        elapsed, without a user input after the user initiates the display command (the

        examiner notes that the time bar 72 is displayed until the user presses Select again

        (see Fig. 11) or until two seconds have expired (col. 27, l. 34-38). That is, the system

        is configured to display the time bar until the time at which a user presses the Select

        button again or until two seconds have expired, at which time the CPU automatically

        causes the display bar to disappear. The examiner interprets this as displaying the

time bar transiently for a predetermined time)(col. 10, l. 20-40; col. 27, l. 34-38; &

Fig. 11).

Young does not specifically disclose displaying next program information automatically at the

preset time. Ellis et al. discloses a program BROWSE mode that displays an overlay portion 111

describing the program currently playing on the current channel (col. 13, l. 19-30 & Figs. 7, 8).

Ellis et al. further discloses that, while viewing the program schedule information for a currently

viewed program, the user can press a right direction arrow to display future program schedule

information for the channel currently being viewed (col. 13, l. 19-30 & Fig. 8A). It would have

been obvious to one of ordinary skill in the art at the time that the invention was made to modify

to the program notes display of Young to allow a user to view program notes about the next

program on the channel, and to allow the user to move between program notes about the

currently viewed program and the next program until the user exits the mode, such as that taught

by Ellis et al. in order to allow a user to create a viewing itinerary while still viewing a program

currently appearing on a television receiver (Ellis et al. col. 1, l. 53-56). Ellis et al. further

discloses that the user may set a REMINDER message to remind the viewer about the future

program at a predetermined time before the start of the future program (col. 13, l. 54-67; col. 14,

l. 1-26; & Figs. 9A, 9B). It would have been obvious to one of ordinary skill in the art at the

time that the invention was made to modify the program notes display of Young to display a

reminder about an upcoming program on the same channel, such as that taught by Ellis et al. in

order to allow a user to create a viewing itinerary while still viewing a program currently

appearing on a television receiver (Ellis et al. col. 1, l. 53-56).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to MICHAEL VAN HANDEL whose telephone number is

(571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Van Handel/
Primary Examiner, Art Unit 2424

1/31/2011